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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/819,810	03/29/2001	Taizo Yamawaki	T&A-106	1463

7590

03/04/2004

MATTINGLY, STANGER & MALUR, P.C.
Suite 370
1800 Diagonal Road
Alexandria, VA 22314

EXAMINER

PHAN, HUY Q

ART UNIT	PAPER NUMBER
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2685

10

DATE MAILED: 03/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/819,810

Applicant(s)

YAMAWAKI ET AL.

Examiner

Huy Q Phan

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-9 is/are allowed.
- 6) ☒ Claim(s) 1 and 10-25 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 6-7.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Double Patenting

2. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

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Claims 10-24 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 5, 3, 6, 4, 7, 9, 10, 13, 11, 14, 12, 15, 17 of U.S. Patent No. 6,608,510 B2. Although the conflicting claims are not identical, they are not patentably distinct from each other because the term "controller" being used in the independent claims 10, 17 and 24 of the prior patent and the terms "control means" being used in the independent claims 1, 9 and 17 of the present application are served the same functions of controlling on –off of the first and second current sources and controlling a short circuit and open of the first and second switches.

3. Claim 2 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 1. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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Claim ^{5, 2 are} 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Savelli et al. (US-6,441,690)

Regarding claim ^{5, 1-2} 1, Savelli et al. disclose in figure 2, a PLL circuit comprising: a phase comparator (7) with current mode output; a low-pass filter (5); and a VCO (1), Savelli et al. also disclose the technique of a phase locked loop converging to a convergence voltage, it is considered that the reference converges the convergence frequency by a PLL feedback loop within a range from "an input voltage" lower (or higher) than a convergence voltage corresponding to the convergence frequency to the convergence voltage (col. 6, line 63 - col. 7, line 55).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sharaf et al. (US-6,249,685) in view of Savelli et al.

Regarding claim 25, Sharaf et al. disclose in figure 10, a wireless mobile station (col. 6, line 30) comprising: a base band circuit; a modulator (from transmitter) for inputting a first base band signal from the base band circuit; a PLL circuit connected to an output of the modulator; a receiver circuit for outputting a second base band signal to the base band circuit; an antenna; and a selector connected with the antenna, wherein

the base band circuit outputs a control signal for controlling an operation of the wireless mobile station (col. 6, lines 29-47). Sharaf et al. fail to expressly recite wherein the PLL circuit comprises: a phase comparator with current mode output; a low-pass filter; and a VCO, wherein in the case where a convergence frequency of the PLL circuit is lower than a setting frequency, the PLL circuit converges the convergence frequency by a PLL feedback loop within a range from an input voltage lower than a convergence voltage corresponding to the convergence frequency to the convergence voltage, and wherein in the case where the convergence frequency of the PLL circuit is higher than the setting frequency, the PLL circuit converges the convergence frequency by the PLL feedback loop within a range from an input voltage higher than a convergence voltage to the convergence voltage. However, in analogous art, Savelli et al. disclose in figure 2, a PLL circuit comprising: a phase comparator (7) with current mode output; a low-pass filter (5); and a VCO (1). Savelli et al. also disclose the technique of a phase locked loop converging to a convergence voltage, it is considered that the reference converges the convergence frequency by a PLL feedback loop within a range from "an input voltage" lower (or higher) than a convergence voltage corresponding to the convergence frequency to the convergence voltage (col. 6, line 63 - col. 7, line 55). Since, both Sharaf et al. and Savelli et al. disclose phase locked loop frequency of cellular phone; therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system by specifically having the PLL circuit comprises: a phase comparator with current mode output; a low-pass filter; and a VCO, wherein in the case where a convergence frequency of the PLL circuit is lower than a

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setting frequency, the PLL circuit converges the convergence frequency by a PLL feedback loop within a range from an input voltage lower than a convergence voltage corresponding to the convergence frequency to the convergence voltage, and wherein in the case where the convergence frequency of the PLL circuit is higher than the setting frequency, the PLL circuit converges the convergence frequency by the PLL feedback loop within a range from an input voltage higher than a convergence voltage to the convergence voltage as taught by Savelli et al. into the system of Sharaf et al. for the purpose of decreasing the noise and increasing the speed of locking the output frequency to the desired frequency.

Sharaf et al. and savelli et al. do not particularly teach a power amplifier connected to an output of the PLL circuit. However, it is a well known in the art to apply a power amplifier to maintain or strengthen the signal before the signal is transmitted.

Allowable Subject Matter

6. Claims 3-9 are allowed.

The following is a statement of reason for the indication of allowance: the prior art made of record and considered pertinent to the applicant's disclosure does not disclose nor fairly suggest a PLL circuit comprising: first to third constant current sources connected to the output terminal of the phase comparator with current mode output; a switch connected between the phase comparator with current mode output and a reference voltage; and control means for controlling an on-off of the first to third constant current sources and controlling a short-circuit and open of the switch.

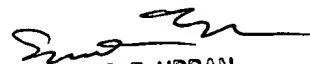
Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huy Q Phan whose telephone number is 703-305-9007. The examiner can normally be reached on 8AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Urban F Edward can be reached on 703-305-4385. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HP
Mar. 01, 2004


EDWARD F. URBAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600